

What is claimed is:

1. An electronically controlled suspension apparatus, comprising:

5 a throttle position sensor for producing a TPS signal which is representative of an amount of a throttle opening;

at least one front damper mounted on a front portion of a vehicle body; and

an electronic control unit including:

10 a determination block for determining whether the TPS signal rises to be greater than a first reference value and for determining whether the TPS signal declines to be less than a second reference value; and

15 a damper control block, which adjusts a damping force of said at least one front damper according to the determination result made by the determination block,

wherein the damper control block sets said at least one front damper into a hard rebound mode to produce a hard rebound stroke during a first control time period when the determination block determines that the TPS signal rises to be greater than the first reference value, and then the damper control block sets said at least one front damper into a hard compression mode to produce a hard compression stroke for a second control time period when the determination block determines that the TPS signal declines

to become less than the second reference value.

2. The electronically controlled suspension apparatus of
claim 1, wherein the determination block allows the damper
control block to set said at least one front damper into
soft rebound and soft compression mode to produce soft
rebound and soft compression strokes after the second
control time period.

10 3. The electronically controlled suspension apparatus of
claim 1, further comprising a vehicle speed sensor for
producing a speed signal which is representative of a speed
of a vehicle and transmitted to the determination block,
wherein the electronic control unit adjusts the damping
15 force in a manner that a degree of the damping force varies
in inverse proportion to the speed of the vehicle.

4. The electronically controlled suspension apparatus of
claim 1, further comprising at least one rear damper mounted
20 on a rear portion of the vehicle, wherein the damper control
block adjusts a damping force of said at least one rear
damper according to the determination result made by the
determination block, and wherein the damper control block
sets said at least one rear damper into the hard compression
25 mode to produce the hard compression stroke for the first
control time period when the determination block determines

that the TPS signal rises to become greater than the first reference value, and then the damper control block sets said at least one rear damper into the hard rebound mode to produce the hard rebound stroke for the second control time period when the determination block determines that the TPS signal declines to be less than the second reference value.

5. The electronically controlled suspension apparatus of claim 1, wherein the first reference value is greater than
10 the second reference value.

6. An electronically controlled suspension apparatus, comprising:

a throttle position sensor for producing a TPS signal
15 which is representative of an amount of a throttle opening;
at least one front damper mounted on a front portion
of a vehicle body; and

an electronic control unit including:

20 a differentiation block for differentiating the
TPS signal;

a determination block for determining whether the
differentiated TPS signal increases to be greater than
a first reference value and for determining whether
the TPS signal decreases to be less than a second
25 reference value; and

a damper control block, which adjusts a damping

force of said at least one front damper according to the determination result made by the determination block,

wherein the damper control block sets said at least 5 one front damper into a hard rebound mode to produce a hard rebound stroke for a first control time period when the determination block determines that the differentiated TPS signal increases to be greater than a first reference value, and then the damper control block sets said at least one 10 front damper into a hard compression mode for a second control time period when the determination block determines that the differentiated TPS signal decreases to be less than the second reference value.

15 7. The electronically controlled suspension apparatus of claim 6, wherein the damper control block sets said at least one front damper into soft rebound and soft compression mode to produce soft rebound and soft compression strokes after the second control time period.

20

8. The electronically controlled suspension apparatus of claim 6, further comprising a vehicle speed sensor for producing a speed signal which is representative of a speed of a vehicle and transmitted to the determination block, 25 wherein the electronic control unit adjusts the damping force in a manner that a degree of the damping force varies

in inverse proportion to the speed of the vehicle.

9. The electronically controlled suspension apparatus of
claim 6, further comprising at least one rear damper mounted
5 on a rear portion of the vehicle, wherein the damper control
block adjusts a damping force of said at least one rear
damper according to the determination result made by the
determination block, and wherein the damper control block
sets said at least one rear damper into the hard compression
10 mode to produce the hard compression stroke for the first
control time period when the determination block determines
that the differentiated TPS signal is greater than the first
reference value, and then the damper control block sets said
at least one rear damper into the hard rebound for the
15 second control time period when the determination block
determines that the differentiated TPS signal is less than
the second reference value.